THE VETERINARY RECORD

A Weekly Journal for the Profession.

EDITED BY WILLIAM HUNTING, F.R.C.V.S.

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VETERINARY YEOMANRY OFFICERS.

In a recent comment on the new regulation affecting the position of Yeomanry Veterinary Surgeons we fell into a rather serious error. We imagined that whilst some would obtain all the privileges of commissioned officers, others, owing to their drawing the pay of a non-commissioned officer, would lose some status. The fact appears to be that only those Yeomanry regiments containing a certain number of troops are entitled to a Veterinary Officer. The smaller regiments must forego the services of a Veterinary Surgeon or else provide for him by appointing him to some office allowed by the regulations. In future the Yeomanry Veterinary Surgeon will be an *Officer* with all the privileges of the rank.

THE ROYAL VETERINARY COLLEGE.

The rumour concerning changes on the professional staff at Camden Town to which we recently gave publicity, is now cleared up by an official report of the last meeting of the Governors. Professor Brown retains the Principalship but is to be moved up to a seat on the Board of Governors. He will cease to lecture, and his class, Cattle-pathology, will be taken by Professor Macqueen. Professo r McFadyean is appointed Dean of the College and Professor of Pathology and Bacteriology. Nothing is said as to the date at which these changes will come into force but we believe no alteration will be made until after the May examinations.

THE FELLOWSHIP EXAMINATION.

The communications which have been sent us on the subject are not quite of even merit. We think it may be acknowledged that since 1876 the quality of the Fellowship examination has not improved, and that during the same time the Membership examination has become more difficult. The examiners who conduct the Fellowship test are all men of eminence and experience, the written questions which have occasionally got into print are as wide and searching as could be required, and yet there is a feeling in the profession that no very special skill is requisite to obtain the Fellowship. The proportion of marks accepted by the examiners may perhaps be small, and thus the written questions not form a very good criterion of the skill of the candidate It must also be borne in mind that very few men present themselves for examination without having devoted a month or two to reading up the subjects they are weakest on. The argument that there are many men amongst the members equal or superior to the Fellows is no discredit to the holders of the "higher degree." We cannot compel all our best men to take the Fellowship. If some prefer to rest content with the diploma which licences them to practice, we may regret their decision but we cannot alter it. If all the Fellows were recognised as front-rank men and a large proportion or the best of the Members held the Fellowship degree there would then be no cavil about the degree really representing the highest merit.

We believe that the degree could be made more acceptable to the profession and more representative of true merit if the form of examination were altered. No practitioner of eight or ten years standing cares to submit himself to an oral examination by three of his colleagues. As a man gets on in life he is almost certain to devote himself specially to some one subject, and on that point he is usually a little in front of his fellow practitioners. Some men have distinguished themselves amongst horses, some amongst cattle and some amongst dogs. One man makes a speciality of the foot and its diseases, another becomes an expert on hygiene, or it may be on obstetrics. The extra knowledge of the specialist is most valuable, but its attainment too often means neglect of some other branches--notably those details of the allied sciences which are most desirable in the candidate for Membership.

It seems to us that the proportion of Fellows might be largely increased by omitting the oral examination and by making provision in some way for the exhibition of special knowledge. Perhaps this might be attained by accepting an essay or thesis from every candidate on any subject he cared to select—such thesis to show either original work or decided mastery of the subject. This would be the preliminary step and be followed by a written paper. It is also a question for consideration whether the fees are not prohibitory, and whether their reduction would not, by the greater number of entries, be quite as lucrative to the College as now.

CASES AND ARTICLES

ARE INJURIES AND MUTILATIONS HEREDITARY?

By Robert Hy. Potts, M.R.C.V.S.

A friend of mine got two fox terriers when they were twelve months old. One of them had only two or three Coccygeal Vertebræ, the other none at all. They had not been tampered with as was evident on examination; but he could never find out positively whether any of their ancestors had had a similar peculiarity.

I had an Irish setter bitch, from which I bred several litters of puppies. Near the end of her tail was a slight crook or twist, as if due to an accident, and in nearly every litter one of the puppies showed this peculiarity. After finding the first one affected, I looked for it in subsequent litters, and by means of a splint in shape of a quill I reduced the deformity and produced a good tail.

[We should be much obliged for details of any cases bearing on this most interesting and important subject. —Ed.]

VETERINARY EDUCATION.

By W. H. Williamson, M.R.C.V.S.

In the controversy upon this subject which has been going on in your columns for some weeks, one argument in favour of the raising of the Matriculation standard has, I think, been omitted. It is allowed upon all hands that the number of students now entering our Colleges is much larger than it was some years ago, and that if this increase is allowed to go on, the veterinary profession will soon become as over-crowded as her sister profession, the Medical. The remedy for this state of things appears at first sight to be the raising of the fees at the various teaching Colleges, but this is at once met by the objection that many young men possessing a natural aptitude for the profession of a veterinary surgeon, and, in other ways, desirable members of the profession, would be debarred from entering it by the increased expenses which this would entail upon them or on their parents. Now, my contention is, that, by raising the educational test required of students before entering college, we would weed out the less promising aspirants and thus, in some degree, prevent that glut in the profession which at present seems inevitable. Some of your correspondents contend that the education of the average veterinary student of the present day is quite sufficient for all that is required of him. To that I must take exception, but even allowing that is correct, are we not entitled, considering the present surfeit of would-be veterinary surgeons, to pick and choose amongst them so that only the best of them will eventually enter our ranks? By all means let us raise the educational test to whatever degree the Council may think fit, and let us set about the matter at once, not waiting until we find that all the world has advanced except ourselves, and that it is absolutely imperative that we should take a step forward in order to prevent ourselves being left entirely in the rear.

As to the advisability of extending the period of time passed at College by a student, I think that if we merely glance at the manner in which the present course is apportioned, the wisdom of such a step will at once be apparent. The present course is nominally a three years' one. Of those three years only *two* are actually spent at College, the other year being made up of vacations. During the first eight months the student devotes his time to the study of anatomy (elementary), chemistry, and botany; the second eight months being devoted to anatomy (advanced), physiology, and histology. But during the third period of study the student has to get up an infinity of subjects, comprising:— veterinary medicine, veterinary surgery, obstetrics, principles and practices of shoeing, therapeutics, morbid anatomy, pathology, and bacteriology, besides attending numerous classes for clinical instruction. Now, chemistry, botany, anatomy, physiology and histology are all excellent subjects in their way, and without a thorough knowledge of them we would be very much at sea, but their importance to the veterinary surgeon in practice is as nothing compared with those subjects with which the much maligned student is expected to make himself familiar in exactly half the time which is allotted to the above-named subjects. Surely this is a sufficient reason for making our course a four years one. There is a constant grumble that graduates are not possessed of that amount of practical knowledge that might reasonably be expected of them. How can they possess that knowledge when they are allowed the short period of *eight months* in which to "read, mark, learn, and inwardly digest" all those subjects which will be of the greatest practical importance to them in after life?

AN EXAMINATION SCHEME.

By A. E. Wild, Demonstrator R.V.C.

I venture to send you the following plan of examination, which differs from those already published in your paper:

THREE YEARS' COURSE.

Class A.

1. Anatomy—
   - (*a*) Osteology of domesticated animals.
   - (*b*) Ligaments.
   - (*c*) Muscles of limbs of horse.
2. Chemistry—
   - (*a*) All mineral preparations used in medicines.
   - (*b*) Method of analysis for the common poisons.
   - (*c*) Physiological chemical tests.
3. Botany—
   - (*a*) Rudiments of structural botany.
   - (*b*) Fodder and medicinal plants.
   - (*c*) Common poisonous plants.

CLASS B.

1. Anatomy and comparative anatomy.
2. Surgical anatomy.
3. Physiology (animal) and histology.

CLASS C.

1. Surgery and medicine of horse and dog.
2. Surgery and medicine of cattle, sheep, etc.
3. Pathology (comparative).
4. Therapeutics and hygiene.

Practical examination as now.

METHOD OF EXAMINATION.

A written examination in addition to not less than half-an-hour oral on each subject. The written in each case to consist of two groups of questions. The second group to be undertaken by those desirous of becoming eligible for the Fellowship degree.

The anatomy and surgical anatomy oral, to be taken in the dissecting-room before the dead subject, and operations to be performed on them by all candidates.

I think this plan has the following advantages:

1st.—The student would learn nothing but what would be of use to him in after-life.

2nd.—None but the very best all-round men would be eligible for the Fellowship degree.

3rd.—The adoption of this plan would entail no very drastic changes, either in the teaching or examinations.

THE STUDENTS' SCHEMES.

The following appeared in *The Students' Record* of December 11th, and concluded the remarks on the examinations which we printed last week:

"As our Contemporary is at present discussing reforms on the present system of examinations, we take this opportunity to print the views of the student on the matter:"—

DRAFT OF SUBJECTS FOR THREE YEARS' COURSE.

This may be used for a lower degree if such be instituted.

CLASS A.

1. Chemistry in relation to Materia Medica, with metals and their inorganic compounds.
2. Botany: Morphology of plants; poisonous, medicinal and diatetic plants.
3. Hygiene.
4. Minor Anatomy.

CLASS B.

1. Anatomy of domesticated animals.
2. Physiology and Histology.

CLASS C.

1. Principle and Practice of surgery and medicine in all diseases of domesticated animals.
2. Pathology and Morbid Anatomy.
3. Therapeutics.

An extra term to be spent in Class C.
All examinations to be both oral and written.
Chemistry and Materia Medica examinations to be practical as well as oral.
Student to have the right of appeal.
The Class C practical examination as at present.

DRAFT OF SUBJECTS FOR A FOUR YEARS' COURSE, *with a higher (University) Degree if possible.*

CLASS A.

1. Chemistry and Materia Medica.—Metals and commonest organic compounds, with tests. (Exam. to be practical.)
2. Botany.—Morphology of plants; poisonous, medicinal, and dietetic plants, with their order.
3. Outlines of zoology, and minor anatomy.

CLASS B.

1. Anatomy of domesticated animals.
2. Physiology (strictly comparative) and histology.
3. Hygiene.

CLASS C.

1. Pathology and morbid anatomy.
2. Embryology and bacteriology.

CLASS D.

Principles and practice of medicine and surgery in all the domesticated animals, and therapeutics.

All examinations to be both oral and written.
Chemistry and Materia Medica examinations to be practical as well.
Student to have the right of appeal.
The Class C practical examination to be held as at present.

VETERINARY SOCIETIES.

THE CENTRAL VETERINARY MEDICAL SOCIETY.

THE PREVENTION AND SUPPRESSION OF GLANDERS AND FARCY.

By SIDNEY VILLAR, F.R.C.V.S.

DISCUSSION.

Mr. HUNTING said it was difficult to rise immediately after hearing the paper read and criticise it properly, but he would endeavour to follow it as closely as possible. He entirely agreed with Mr. Villar as to the sole cause of the disease being a specific organism, and therefore it can never arise *de novo*. Fortunately the virus was one that did not retain its vitality long, and therefore it should be one specially fitted for stamping out. He believed that the spread of the disease was nearly always effected through the stomach, and the chief means of infection were nose-bags, mangers, and water-troughs. He was glad to hear Professor Simonds was of the same opinion as himself as to ingestion being the method of infection, and not inhalation. It had often been shown that the disease could be communicated through the stomach, it had never been shown that it might spread through the respiratory membrane. As to the distribution of the disease Mr. Villar showed that London was the great centre in which it existed, and that the surrounding counties came next. In Wales the disease was absent, and in Scotland only one county was infected. He (Mr. Hunting) had said that many other large towns were infected, but did not report their cases—probably he should be reminded of this. It was true that some years ago he had evidence of this unreported disease, but from recent enquiries he was led to believe that very few cases were now hidden away. The disease was decidedly on the decrease, but more cases were reported, so that, although a few years ago the returns were very erroneous, he believed now they fairly represented the number of cases and its distribution. In London very few cases escape being reported ultimately, although no doubt some are slipped through the horse-slaughterers, and some find their way into the surrounding country districts. Many cases which recover or are "patched up" are not reported at first—they are sold, and pass to other stables,

spreading disease, but when their final attack comes they are reported, so that the returns may be accepted as very nearly including all the animals that die or are killed for glanders and farcy.

Mr. Villar stated his belief that the disease could, by proper regulations, be stamped out, and with one solitary exception he never heard any one say that it could not. Mr. Villar proposed that any amendment of the Act should provide for the earliest destruction of both glanders and farcy. With this he quite agreed, for there could be no doubt that one form was quite as effective in spreading contagion as the other. He was also in accord with the essayist in saying that the traffic in "suspicious" farcied and "in contact" animals was the chief factor in spreading the disease. Mr. Villar recognised that some compensation for *all* the horses slaughtered would greatly assist the extermination of the disease, and he (Mr. Hunting) was prepared to allow that the arguments were strong for including more than farcy in any compensation scheme. He had proposed compensation for farcy only under the idea that it would lead to the co-operation of horse-owners in carrying out the regulations. He did not propose compensation for marked cases of glanders because the law now required their destruction, and there was no hardship in destroying a horse which was dangerous and incurable. This evening he was forcibly struck with the difficulties of arbitrarily dividing the different forms of the disease, especially in providing for those most indefinite cases described as "suspicious." He would recognise the argument in favour of slaughtering and giving compensation for all these as well as for farcy. There is a distinction between glanders and farcy; the present Act recognised this by its regulations and did not insist upon slaughter for farcy. If some horses can be cured and others rendered useful for work it was a hardship to compel the slaughter of these without giving compensation. Slaughter was necessary to successfully stamp out the disease, but the necessity was for the good of the whole body of horse-owners and the national welfare, so that the individual owner ought not to be compelled to suffer entire loss for the good of the community. Mr. Villar pointed out that if the authorities were compelled to give compensation they would undoubtedly increase the stringency of their regulations. He quite admitted that, and believed that when horse-owners saw they would be assisted with their losses and protected from fresh invasions of disease, they would heartily co-operate with the authorities, and willingly submit to extra stringency. He believed that with compensation for farcy and for doubtful cases, with more stringent regulations, and the increased popular knowledge of the disease only a very few years would be required to stamp it out. He also believed that the amount of compensation required would be far below the annual cost now caused by the disease, and of course it would be a rapidly decreasing amount each year as the disease gradually disappeared. (Cheers.)

Mr. DOLLAR said that the great question was that of giving compensation for farcy. The profession had been pretty unanimous on the subject, althongh some of them were so far behind as to believe it impossible to stamp out the disease. The question was complicated, as they had so many contradictory opinions. The compensation clause was an exceptional portion of an exceptional measure. The only diseases for which compensation was given were pleuro-pneumonia and swine-fever, and in a few unusual instances foot and mouth disease. As all these diseases were exceedingly infectious it was quite impossible to determine how many contact animals were affected, and therefore it was considered advisable to slaughter infected and suspected alike. The hardship of slaughtering healthy cattle was met by compensation. But the law was quite clear on the point that where it stepped in and destroyed an animal already affected with a fatal disorder no compensation was due. This was further shown by the fact that the Contagious Diseases (Animals) Act 1878, ordered local authorities to slaughter "contact" animals and give compensation. In the case of pleuro-pneumonia, the number of healthy slaughtered exceeded in 1890 that of diseased nearly six times. Under the new Act it was nearly ten times. These facts he thought, disposed of the attempted parallel between pleuro and farcy.

The system of compensation had had the advantage of being in operation for 12 years; people had become accustomed to it and it was administered in a most liberal manner. Prof. Brown's report (1890) says "The compensation is paid on a fair and liberal scale and with a full recognition of the cost of replacing the cattle slaughtered; and the slaughter is carried out by officials of the Board in such a way as to cause the least possible inconvenience to the owner . . . . . So soon as the cattle have been slaughtered the compensation due from the Board is at once paid. The premises are thoroughly cleansed and disinfected at the expense of the Board, and afterwards the owner is allowed, with the least possible delay, to continue his usual business." Now what is the result? To go back a little they would find in the report for 1884 "Even the owners of dairy stock have said in plain terms that they prefer letting the disease run its course in the herd to the alternative of slaughter and compensation to the full value of the animals," and again "In the face of the plainly expressed objection of stock owners it was not considered desirable to direct it." Similar remarks were made in each succeeding year and even in 1890 after 12 years' working, we read "Another source of difficulty encountered by the Board arose from the disinclination of owners of dairy stock to make the existence of the disease known." Now if the education of the past 12 years, the knowledge of the dangerously infective character of the disease and the very full and liberal interpretation of the compensation clauses have failed to secure the reporting of pleuro, can they expect a *new* measure, dealing with a *contagious* malady—and that by no means excessively so—and backed by half compensation only, to be productive of better results. I said *better* results. What are the results produced by compensation for pleuro? In six years the deaths have increased six times. In 1884 1,731 cattle were slaughtered for pleuro. In 8 months of 1890 the figures had risen to the enormous total of 7,343, or at the rate of 10,964 per annum. For this slaughter the country was mulcted at the rate of £114,999 per annum and the result has been failure—absolute failure. On the 1st September, 1890, a new and more stringent Act was passed, under which we shall doubtless have to pay more dearly than ever.

But if compensators have their way this will not be the worst. Mr. Hunting bases a claim on the fact that it is possible to patch up cases of farcy and sell them. I say on Mr. Hunting's authority, that it is possible to patch up cases of glanders, and if this is not sufficient I can adduce the support of the late Prof. Robertson (p. 112: 130.) Now if we must compensate men because farcy can be patched up we must compensate equally for glanders. And the evil will not stop there for on Mr. Hunting's other principle that "compensation is due to the man who suffers for the benefit of others" we must include anthrax and rabies, and probably tuberculosis.

The second point is what would compensation cost? Let us consider farcy alone. First I will quote Mr. Hunting: "If a small compensation were given for farcy (Mr. Hunting suggests half-value) every case would be reported, and the two diseases would probably be stamped out entirely in three years . . . . . Compensation of £10 would at most amount to £10,000 a year. The utmost cost to Government would amount to 5 years compensation £50,000." On the same page—"Unless this be done

we shall continue our annual loss of £30,000." On Mr. Hunting's own figures compensation at half rates already amounts to £15,000. In his book on glanders he says "The whole country loses annually 4,000 horses of the average value of £15—a total loss of £60,000." At half value this would be £30,000, *i.e.* three times as much as Mr. Hunting's first estimate. Towards the end of the book, is a table extracted from the report of the Privy Council with the following foot note "If these figures be multiplied by five an approximation to the annual loss of horses by this preventible disease will be arrived at." Now I want, as far as possible, to act fairly in this matter so I will take last year's farcy statistics, which were small, for the basis of another calculation. The number is 864, multiplied by 5 we get 4,305. At the £10 rate of compensation this will be £43,050. You will note we are still rising. Now the cause of Mr. Hunting's agitation is that many horses affected with farcy are never reported—in fact he thinks as many escape as are reported. That would bring his figures up to a grand total of £86,100. His remarks are, however, in entire accord with those of the inspectors of the Privy Council Office. In 1884 attention is directed to the singularly large number of cases of farcy in the London district. In 1888 the annual report says "The county of Middlesex and the metropolis contributed no less than 756 out of the 920 cases returned in the whole of Great Britain; the county of Lanark comes next with a total of 69 leaving only 95 for the rest of the country. Such a return must be regarded as very unsatisfactory as it is scarcely possible to believe that only two cases could have occurred in the county of Lancaster with all its large cities and boroughs and in the county of Durham not a single case occurred." Again in 1890 "It seems very strange that Lancashire and Yorkshire, with their large towns in which horses are kept and worked in much the same way as they are in London, should be so free from the disease." But the figures speak more eloquently than any words. Last year 861 cases of farcy were reported in Great Britain; of these London and the metropolitan counties contributed 847, leaving 14 for all the rest of England, Scotland and Wales.

To avoid the insinuation that I am a destructive critic only, I suppose I must make some suggestion for dealing with this condition. It seems allowed on all sides that the evil results from sale of "patched up" horses. And here again we may learn something from pleuro-pneumonia. The annual report of the Board of Agriculture for 1890 says "It appears then from the above table that the restrictions on the movement of animals during the years 1880-84 had more effect in reducing the number of outbreaks of pleuro-pneumonia in Gt. Britain than the slaughtering of the affected cattle or even the slaughtering of the diseased and those in contact as carried out by the local authorities." If then we can restrict the sale of farcied horses we may hope to check the progress of the disease. I would therefore suggest that in every case where farcy or glanders breaks out in a stable, all horses in the same stable or which may have been in contact with those affected, be branded on the hoof with a distinguishing mark so as to be readily recognised by anyone. This mark will take a varying period of from 6 to 8 months to wear out and during that time the horse can be readily detected and examined, and his sale becomes impossible. There is no need to stop him working. It seems that farcy is not frequently caught when at work and of course this measure would in no way interfere with the working of the Contagious Diseases (Animals) Act. If a branded horse suffering from glanders or farcy were detected at work there would not be the chance that now exists of pleading ignorance—swift and sure punishment would follow. A very valuable suggestion was to place an inspector permanently at each of the slaughter-houses to inspect every pair of lungs. In this way no farcied or glandered horse could be slipped past, and infected stables would rapidly be localised. Another suggestion made was that a permanent salary of £400 or £500 a year should be given to inspectors, and that private practice should be forbidden to them. Lastly, I think it very necessary that every veterinary surgeon should be obliged to report cases of farcy or glanders as soon as seen. The same kind of thing is done by the medical man and if the slaughter-houses were properly watched there would be no danger of concealment, and treatment of the disease by unqualified men.

Mr. HUNTING said there had been no slaughter of "contact" animals for pleuro prior to 12 months ago.

Mr. SAMPSON said he agreed that London was the seat of the disease. Out of the last dozen cases he had seen, nine came from London. The whole question was one that would require a great deal of consideration. He had very great doubt whether compensation would stamp out pleuro-pneumonia, in fact, he was rather inclined to think it would not. There was no difficulty at all under the present Act. A man reported an outbreak and the official had the animals slaughtered and he got his money and then put in a fresh stock. There were two men that did this thing continually, and so far as they were concerned the disease had been spread. He did not believe in the Government killing a man's animals without paying him—it seemed hard, but at the same time there were many in London who would be glad to buy glandered horses with a view to getting compensation, and in that way compensation was as likely to spread the disease as to stay it.

Mr. SHEATHER said it was no uncommon thing for the owner of 100 horses to lose three in a week. He did not think the disease was so prevalent as it was 20 years ago, and it was passing into a new phase too. For every three or four cases of farcy in the stables he saw 15 of glanders. If the matter was to be dealt with, it must be dealt with thoroughly and from the very root. There was not the slightest doubt it could be stamped out—if it was out of the stables then it would be out of the town. In large stables the V.S. did not carefully inspect every horse, and without this was done the disease could not be got rid of. "Suspicious" horses formed a large class and they must be taken into consideration in any question of giving compensation. The disease could never be stamped out in three years, but it might be done in twelve years. He had known a case of farcy continue over six years and then break down into glanders.

Mr. BRAY said this was one of those things which they all agreed was of great importance to horse-owners, especially to such large owners as omnibus proprietors and tramway companies, although private or small owners suffered considerably from the number of animals slaughtered, He quite agreed that it was a most difficult disease to deal with. What were they to do about the "suspicious" cases? Out of a stable of eleven horses he had known nine to be suffering from glanders or farcy. The two were put by themselves, and for one or two years they were not considered even suspicious, but some time after one of them showed symptoms of farcy, but the other showed no symptoms and was kept on till some months after when it also showed symptoms—three years after the outbreak.

Mr. SHEATHER asked if there were any cases reported in Ireland.

Mr. DOLLAR said there were no statistics given in the English Report of any disease in Ireland, although he believed the Act related to Ireland, inasmuch as it made provision for £20,000 in dealing with pleuro-pneumonia.

Vet-Col. DUCK said it would be of great service with regard to suspicious cases if they could readily determine if it was a specific infectious disease or not.

Mr. CATON said he should like to know whether it was legal or not to inoculate animals, because he had been

told that it was illegal. If he had a doubtful case given to him he should undertake the donkey inoculation test. He heard that it was the first test used in the army. Compensation he considered very complicated. He would also like to know whether it was possible for an animal to be affected locally and recover?

Mr. ROGERSON said that so far as his experience went, the chief source was from the large stables, and he had come across a large number during the last 10 years. The Act should be rigidly enforced by inspection and all suspicious cases thrown out and isolated. Farcy was a most difficult question. He moved that the discussion be adjourned seeing that it was such an important subject and the late hour inconvenient for Mr. Villar to reply.

Mr. CATON seconded the motion which was carried *nem. con.*

ROYAL VETERINARY COLLEGE V.M.A.

The last meeting of the above society held this year took place in the theatre of the College at 6.30 p.m. on Wednesday December 9th, 1891, Mr. H. W. Dollar in the chair.

Mr. EASTE introduced a very fine specimen of the brain of a horse which contained two tumours in the lateral ventricles, each about the size of a pullet's egg; the animal being only 6 years old.

Mr. GALRUTH introduced some calculi taken *post-mortem* from the intestines of a horse; one of them being cut through and showing the nucleus to be a piece of metal.

An Essay was delivered by Mr. MORRIS on "Parasites of the ox, sheep, pig and dog." Commencing with *trematoda*, Mr. Morris described the life history and development of *fasciola hepatica*; gave the symptoms of "rot" or helminthiasis, dividing it under three stages: 1. Early stage: Torpidity, thirst, painful rumination; the animal often beginning to fatten. 2. Advanced stage: In which we get pain on pressure to the region of the loins; conjunctivæ, yellow and œdematous; wool brittle and easily detached. 3. Final stage: In which we get pendulous abdomen, tottering gait, and death from two to six months after the appearance of the first symptoms. Treatment consists in removing the animals to high lands and salt marshes; carefully clean out all ponds and ditches; and last, but not least, to set children to pick up all the snails they can find, as at one time in the life history they form a host for the parasite.

In cestoda he mentioned *tænia expensa*, which has been known to attain the length of 100 feet in the ox. In lambs good results have been attained from using equal parts of ol. terebinth and Tr. assœfetida mixed with ol. lini.

Just alluding to *cysticercus bovis* the bladder worm of ruminants and *cœnurus cerebralis* (the cause of gid in sheep) the essayist then proceeded to describe nematoda. Commencing with *strongylus micruris* which causes "husk" in calves he stated that there was some dispute as to its method of gaining access to the lungs, one theory being that it was taken into the mouth with the food and wriggled into the larynx, and so to the trachea; another being that they pass from the stomach through the diaphragm into the lungs. *Strongylus filaria*, which also causes husk; and *strongylus contortus*, often found in the stomach of the sheep.

The parasites in the dog were next taken: trematoda are not often found. Cestoda are very common. some of which are the *Tænia serrata*, *tænia cœnurus* and *tænia cucumerina*. *Tænia serrata* is common in harriers and greyhounds, probably due to the fact that these animals are often allowed to eat the entrails of hares and rabbits. When the mature segments are eaten and digested by rabbits, 24 hours afterwards a lot of six hooked embryos are found in the blood of the abdominal veins; on the 6th day these are found in the liver, and in 6 weeks time are free in the abdomen. Between the 7th and 8th weeks they re-encyst themselves in the mesentery and omentum, forming pear-shaped bodies each known as cysticerci fusiformis. If a dog now eats one of these cysticerci, in from 3 to 6 hours, the capsule is digested. At the close of the 3rd day the young strobile is half an inch long. In 21 days there are sexual organs in the lowest joints and in 28 days some ripe joints are seen to contain eggs, and the strobile is 2 feet long.

A Russian has succeeded in rearing the larvæ of *tænia cucumerina* in the mange mite, sarcoptes canis; he then fed puppies with the mites and found the mature worm on *post-mortem* examination. The *pyroglottides* escape by means of the anus, crawl on the dog's back and expel their eggs on the coat. These are swallowed either by the dog louse *tricodactes latus* or the "mange mite" (*sarcoptes canis*). In the mite or louse they become encysted, and, when the parasites cause irritation to the skin of the dog, the animal, in biting the part swallows the offending parasite, thus transferring it to the intestinal canal, and in 5 weeks the larvæ thus encysted there become mature tapeworms.

The larval form of *taenia coenurus* produces "Gid" in sheep.

Of nematoda, *ascaris marginata* is so common that it has been estimated that 35 out of every 40 dogs are infested with it.

In conclusion Mr. Morris mentioned *trichina spiralis*, which causes *trichinosis* both in man and animals, and also several parasites which infest the cat. A discussion ensued in which Prof. Penberthy exhibited a number of specimens.

Votes of thanks to the Essayist and Chairman, and also to Prof. Penberthy terminated the proceedings.

F. HOBDAY, *Assist. Sec.*

LANCASHIRE VETERINARY MEDICAL ASSOCIATION.

The quarterly meeting of this Association was held in the Medical Institute, Hope Street, Livepool, on Wednesday, December 16th, the chair being occupied by Mr. Arthur Leather, F.R.C.V.S., president of the association. There was a satisfactory attendance of members from the different districts. Mr. Laithwood, of Congleton, was nominated for membership of the association. Mr. John M'Kinna, M.R.C.V.S., Huddersfield, Mr. H. D. Chorlton, M.R.C.V.S., Manchester, and Mr. Arthur Breakell, M.R.C.V.S., Garstang, were unanimously elected members.

It was decided that this association should continue to hold its meetings at the Blackfriars Hotel, Manchester. Mr. Sam. Locke (Manchester) was elected a life governor to the benevolent branch of the National Veterinary Benevolent and Defence Association.

The officers for the Lancashire Association elected for the ensuing year were as follows:—President Mr. W. Woods, Wigan; vice-presidents, Mr. Morgan, Liverpool, and Mr. Thompson, Sheffield; secretary, Mr. J. B. Wolstenholme, Manchester; treasurer, Mr. T. Hopkin, Manchester; auditors, Messrs. W. A. Taylor and S. Locke, Manchester.

Professor M'FADYEAN, of Edinburgh, described and demonstrated, by means of the oxy-hydrogen lantern the

lesions of contagious pleuro-pneumonia and the lesions of equine tuberculosis. He was inclined to take up the position that the lesions in an ordinary case of contagious pleuro-pneumonia were sufficient without the clinical history to enable veterinary surgeons to diagnose the case. He exhibited a number of slides showing sections of the lung from the animal slaughtered at Deptford, about which so much controversy has arisen. At the close of the lecture an animated discussion took place as to whether pleuro existed in the specimens exhibited, the general balance of opinion being that the English authorities had proved their case. The meeting closed with votes of thanks to the lecturer and to Mr. Leather, the retiring president.

Previously to the meeting tea was partaken of by the members of the association at the Adelphi Hotel.

Liverpool Daily Mercury.

EXTRACTS AND NOTES.

THE ROYAL VETERINARY COLLEGE.

At a meeting of the Governors of the College, held on 18th inst., under the presidency of Col. Sir Nigel Kingscote, K.C.B., and which was also attended by Mr. Berens, Col. the Hon. W. H. Allsopp, Rt. Hon. E. Marjoribanks, M.P., Sir Jacob Wilson, Col. Lambert, C.B., Dr. Crookshank, Mr. Allender, Mr. J. A. Bloxam, F.R.C.S., Mr. Barnard Holt, F.R.C.S., Mr. Walter Gilbey, and Mr. G. H. Sutton, a recommendation from the General Purposes Committee was submitted and unanimously adopted, appointing Prof. McFadyean, F.R.S.E., C.M., M.B., B.Sc., M.R.C.V.S., Dean of the College, and Professor of Pathology and Bacteriology; Prof. Macqueen, F.R.C.V.S., was also appointed to the Professorship of Cattle Pathology.

On behalf of the Governors, Sir Nigel Kingscote thanked Prof. Brown for the assistance he had given them as Principal of the College, and hoped he would retain that office, and also, at the next opportunity, be elected a Member of the Governing Body.

It was announced in connection with the recent celebration of the Centenary, that Her Majesty the Queen had graciously consented to be Patron of the College, and had also become an Annual Subscriber to the funds of the Institution

WOOLSORTERS' DISEASE.

In the *Arch. de Méd. Experimentale*, August, 1891, S. Lodge gives an account of broncho-pulmonary charbon with five cases. In a short historical sketch attention is drawn to the diminution of the disease since 1884, when precautionary measures were enforced. A few cases are still seen owing to the occupation sometimes being carried on in private and with neglect of precautions. The smell and irritant properties of the dust are well recognized. The following are among the symptoms: *Malaise*, bodily fatigue and somnolence, coryza and lachrymation, cough, at first dry and then with expectoration containing anthrax bacilli, and difficulty in taking a deep breath. Palpitation, nausea, and vomiting may be present, and the author looks upon a feeling of constriction at the base of the chest as pathognomonic. Physical examination reveals a bilateral pleurisy with moderate effusion and also foci of broncho-pneumonia. The urine contains albumen and sometimes even sugar. The temperature is never above normal. When fatal the disease lasts about six days. If the patient's occupation be unknown the diagnosis may be difficult. The prognosis should be cautious. Attention is drawn in the morbid anatomy to œdema in the tissues of the neck and mediastinum. There is fluid in the pleural and pericardial sacs. Besides injection of the bronchial mucous membrane there are elevations of a deep red colour. The organisms are mostly found in the submucous tissue and also in the broncho-pneumonic foci. The spleen is usually normal in size. Prophylactic measures consist in ventilation and burning the dust collected in the ventilators, in the disinfection of the hands, and the use of special clothes. Eating in the workshop is forbidden. The diseased wool should also be disinfected by superheated steam —a point not enjoined in the regulations.—*British Medical Journal.*

APPRENTICESHIP.

The old apprentice began his career under conditions that have passed away. His education was totally devoid of any sound scientific foundation, so that in order to overcome that disadvantage, which told even worse on the public than on himself, hospital teaching was organised, and its value was soon recognised. At first hospitals were "walked" by the wiser students, who made private contracts with the medical officers. Then the colleges made attendance in the wards of a hospital compulsory, and the fees paid to medical officers or staff had in consequence to be regulated. In all other departments of medical school teaching the same form of evolution occurred. The diligent went of their own accord to lectures. Soon lectures were made compulsory on all students. So it was with dissecting. A new era naturally followed; attendance in wards was found insufficient, and the colleges demanded certificates that the student had actually undertaken the charge of patients. It was an era not of organization of a new system, but of perfection of a system already in force. It ended in the present system of medical education, under which the practical as well as the scientific instruction of the student has become wholly academic.

That apprenticeship in a new form is advisable, no one can doubt. It must follow the student's scientific education, which is best commenced when he is still very young, capable of acquiring scientific knowledge, but hardly fit for the care of the sick. Now it happens that practitioners complain that they have great trouble in finding good qualified assistants. Where are these to obtain the necessary experience? Clearly from private practice. The practitioner,

however, does not wish this experience to be gained for his young assistant at the cost of his patients and his reputation. Only one remedy remains. The practitioner must be ready to train apprentices. This is apparently the natural solution of the difficulty. Otherwise a time will come when few practitioners will take any assistant who is not the son of a doctor, and the country will be flooded with an army of young medical men blundering through their work at the expense of themselves, their patients, and the reputation of their profession, owing to the want of the incalculable advantage of an elder associate at the outset of their career.

The practitioner, then, should solve the problem. If he (as a class) wants a young assistant good from the beginning, he must train young men to be good assistants. To develop a well-educated young man by apprenticeship, into a good assistant, and to make that assistant into a good partner, ought to be a congenial task for the practitioner. It would lighten his work, and would involve a fair honorarium. The wants of the practitioner, as expressed above, will probably drive him to the course just indicated. When a new form of apprenticeship of this kind becomes general, it will grow into a system, and relieve the practitioner from a source of constant annoyance.—*British Medical Journal.*

RESISTANCE OF THE RABID VIRUS TO THE ACTION OF LONG-CONTINUED COLD.

Mr. A. Chauveau has presented to the Academy of Medicine of Paris, in the name of Mr. Jobert, the report of the following experiment:

"A rabbit inoculated with rabies, of which it had died, is placed the same day in a cool chamber and submitted to cold of .—10 F During the ten months it was left there, it was exposed to temperature varying between ,—10 and .—20 . especially in September, 1890, December, 1890 and Msrch, 1891. On the first of June the rabbit was taken from the cool chamber, conveyed in an elevated temperature upon a journey that lasted five hours, after which he was entirely thawed out. He was then again placed on ice and the next day the extraction of the spinal cord was performed, to test if the rabic virus had resisted the prolonged action of cold.

With the bulb, which appeared like that of a rabbit just killed, perhaps of less consistency, a large and strong rabbit was inoculated by trephining. On the fourteenth day he was sick, and died paralytic on the sixteenth day. With its bulb five other rabbits were inoculated, through the anterior chamber of the eye: one died the next day from traumatism foreign to the operation, the four others succumbed with all the symptoms of paralytic rabies. The bulb of one of these animals was used to inoculate two other rabbits through the eyes; both died with rabies.

To make the experiment more positive, two rabbits were inoculated with the bulbs of these last animals; each rabbit received one inoculation from one bulb only. These also died with rabies.

Conclusions:—With the four successive series of inoculations, rabies has always taken place and "*it seems evident that cold has no action on rabic virus.*"

Mr. Laquerriere has already proved that the virus of pleuro-pneumonia can be kept for a long time when exposed to intense cold. If the same can be said of the vaccine for rabies or other vaccine fluids, the work of the preservation of prepared vaccine will be considerably simplified. The results of the experiments obtained by Mr. Jobert seem to indicate that this mode of preservation is possible.—*Jour. Soc. Scientif.*

COMMINUTED FRACTURE OF THE BONES OF THE KNEE.

By H. H. Edwards, Veterinary Student.

The subject of this accident was a bay gelding, five years old. He was ridden to Heidelberg from Camberwell, a distance of about four miles, when upon going over some loose metal he stumbled and became very lame. The rider, thinking that the animal had picked up a stone, dismounted, but nothing could be seen to account for the lameness, which became so excessive that he was taken home. He walked very lame; but, notwithstanding the pain which must have accompanied such an injury, he placed weight on the limb as its fellow was brought forward. When standing in the stable the leg presented a peculiar appearance, There was a bulging of the anterior part of the knee, which upon manipulation was found to fluctuate slightly, and to contain fragments of bone. When the foot was placed on the ground, the knee could be moved freely in a lateral direction, giving at first sight the impression that the lateral ligaments were ruptured or torn from their attachments. Crepitations could be heard during all these movements, but more especially when the carpus was fixed and the radius moved laterally.

Two days after the injury the horse was destroyed, and the following lesions were noted, *post mortem*:—The scaphoid and lunar bones were fractured transversely, the posterior part of the scaphoid being broken into fragments, the largest piece being no larger than a pea. Some of the radio-carpal, carpal, and interosseous ligaments were torn from their attachments. In addition to this there was an old standing fracture of the scaphoid, the anterior face of that bone having been chipped off previously. This piece of the scaphoid had fallen from its position, and had worn a bed for itself on the supero-anterior part of the os magnum. This condition, however, had not interfered very much with the animal's locomotion, as he had been bought a few weeks previously, apparently sound, for thirty guineas.—*Australasian Veterinary Journal.*

REVIEW OF RECENT PARASITICAL WORK.

By C. W. STILES, Ph.D., Washington, D.C.

Dr. O. Deffke. Die Entozoen des Hundes II. (Archir für wiss. u. prakt, Thierheilkûnde. xvii. 1891, p. 253-289.) In this article, published after the author's death, we find some very interesting and important statistics in regard to the internal parasites of dogs in Berlin, Prussia. Two hundred dogs, killed at the veterinary school, were examined for parasites. The general results of the investigation are as follows:

1. The following species of internal parasites are known to exist in dogs: *Protozoa:* Cercomonas intestinalis (Lamb); Coccidium perforans (R. Lkt.); Coccidium bigeminum (Stiles), (see below). *Vermes:* Distoma campanulatum (Ercolani); D. felinum (Rivolta); D. conjunctum (Cobbold); D. echinatum (Generali); Hermistomum alatum (Diesing); Bothriocephalus latus (Bremaer); B. cordatus (Leuckart); B. serratus (Dies.); B. fuscus (Krabbe); Taenia echinococcus (v. Siebold); T. cucumerina (Bloch); T. marginata (Batsch; T. serrata (Goeze); T. coenurus (Kuchenm); T. Krabbei (Moniez); T. lineata (Goeze); T. serialis (Baillet); Echinococcus polymorphus (Hartmann); Cysticercus cellulosæ (Rud); C. pisiformi (Zeder); Ascaris marginata (mystax) (Rud); Oxyuris vermicularis (Rud); Eustrongylus gigas (Dies.); Strongylus canis bronchialis (Osler); S. vasorum (Baillet); S. canium (Erc.); Dochmius duodenalis (Dubini); D. trigonocephalus (Rud.); D. stenocephalus (Rud); Trichina spiralis (Owen); Trichocephalus depressiusculus (Rud.); Trichosoma plica (Rud.); Filaria immitis (Leidy); F. sanguinolenta (Schneider); F. medinensis (Ginelin); F. trispinulosa (Gescheidt); F. Bronchialis (Blmbrg); Nematodeum canis familiaris (Warren); Ver nématoide du rien du chien (Vûlpin); Echinorinco del cane (Perroncito); E grassi (Grassi). *Arthropoda:* Pentastomum taenioides (Rud.); Larva of musca cadarerina: Sarcophaga çarnaria; S. hemorrhoidalis; Necrodes litoralis

2. The dogs of Berlin are comparatively free from Entozoa.

3. Taenia marginata, T. serrata, and T. coenurus were found to be the most frequent.

4. T. echinococcus and Pent. tænicides were also quite frequent.

5. The following dogs were most frequently infected; *a.* Large races, hounds (Doggen); *b.* one-year-old dogs and very old dogs; *c.* the males; *d.* poorly-nourished dogs.

One of the parasites mentioned is coccidum perforans Lkt., frequently found in the intestines of the rabbit. I have, myself, examined a large number of dogs, but have never found this species. Ralliet and I found Coc. bigeminum, Stiles '91, very prevalent in Parisian dogs, and it is not impossible that Deffke has mistaken this species for C. perforans. If such, however, is not the case. I can add one more parasite to Deffke's list.

The statement that poorly-nourished are more frequently affected than others is possibly open to criticism. The presence of the parasite will undoubtedly explain the poor condition of many of the dogs, in other words the parasites are the direct cause of the apparently poor nourishment of the animals.

Protozoa:

Dr. Anton Sticker: Die gefahren der protozoen der Schlachthiere fur den Menschen (Archir f. animalische Nahrungsmittelkunde, VI., 1891, No. 2, p. 18-20; 6-7, p. 85-86; 10, p. 131-132). In the above-named article Dr. Sticker brings forward no original results, but in a neat review of the work of other investigators, describes the development, so far as known, of some of the microscopic parasites, in such a manner that the necessity of further original work on the subject will be apparent to the large class of people into whose hands his articles must necessarily fall. He describes briefly the Coccidia, the Sporidia (Micro-Sarco, and Sarcosporida), and Haemogregarina (falsely called by him the gregarina).

In one place we read, "the gregarina belong to the true blood-parasites, which undergo their development inside the red blood corpuscles," etc., p. 133. This should undoubtedly read "*to* the gregarina belong, etc.," since the term gregarina, as used by the zoologists, includes a vast number of parasitic protozoa which develop in the intestines and other organs of animals, such, for instance, as Clepsidrina blattarum in the intestinal canal of the roach, Monocystis agilis in the testes of the earthworm, etc. The term Haemogregarina has been employed by many authors to designate the parasites of the red-blood corpuscles.

Dr. Sticker call special attention to the important work done by Dr. Theobald Smith on the blood-parasites in Texas fever. Dr. Smith's discoveries in Texas fever, and Prof. Laseran's discovery of the blood-parasites in malaria, are described by Sticker as the most important discoveries yet made on the subject of pathogenic protozoa.

It occurs to me that Dr. Sticker lays altogether too much stress upon the dangerous character of the small cysts found in the muscular fibres of various animals and known as Sarcosporidia. So far as is yet known, these parasites are perfectly harmless to man. To prove this fact, the late Prof. Cobbold, ate a portion of meat containing thousands of these spores. Sticker dwells at some length upon the negative results obtained by Dr L. Pfeiffer, from feeding meat infected with sarcosporidia to various animals. I have found these sarcosporidia very frequent in American and French animals (pigs, sheep, cattle.) From April 1, to April 15, 1891, out of twenty-four sheep which I examined at the Pasteur Institute in Paris, I found twelve infected with sarcocystis tenella and two with Gigantea. Numerous experiments followed for several months, gave only negative results, and have led me believe that the so-called semi-lunar disc must undergo some further change outside the body of the host, before it can infect a new animal. From hundreds of cases examined I have never found anything to support the view advanced by a certain German

author, that a large number of individuals can become encysted altogether—in other words that some of the cysts result from a double or multiple infection. On the contrary, I believe that every cyst develops from a single spore. The authors have have been somewhat divided as to whether the cyst wall is ciliated, pierced with pores or finely annulated. The cuticle of all the cysts I have examined were very finely annulated. If care is taken to isolate the sarcosporidia from the muscle fibre, the minute lines of annulation on the cyst wall are very distinctly seen. Caustic potash brings them still more clearly to view. In the middle portion of the cyst the lines run at right angles to the longitudinal axis of the parasites. At the two extremities where the cyst wall is somewhat thicker, the lines incline V-shape towards the median line.

ELECTRICAL ACCIDENTS TO DOMESTIC ANIMALS.

By James A. Waugh, V.S., Allegheny, Pa.

The application and utilization of electricity as a motor power for street railway coaches, and the use of cheap or badly constructed or defective arrrangements in road-beds, prove sources of occasional serious accidental electrical injuries to horses that are driven over these car-tracks, and come in contact with rails which have become surcharged with an excess of electricity, due to a settling or sinking of the road-bed, and breaking of the underground wires, which cause breaks in the electric circuits.

Horses are often injured by attempting to cross from one set of tracks to another while cars are approaching in opposite directions, and especially when approaching river bridges. The horse happens to step with one fore and one hind foot, or both fore and hind feet at the same time, on the inside rails of the double tracks, and the metallic shoes on the horse's feet act as conductors, which transmit the electricity to the animal and causes it to rear or spring several feet up into the air, and then fall prostrate on the street; while other cases are shocked so severely that they fall prostrate and remain paralyzed. The character of the injury is in proportion to the amount of electricity received, intensified by violent contact with the street. The shock may be so severe as to cause instant death, or only partial paralysis with almost complete prostration for a few hours, or several days, weeks, or months. The pulse is slow, feeble and irregular: nostrils dilated; respiration slow and laborious; temperature slightly elevated; pupils dilated or contracted, and the eyes presenting a peculiar and unnatural expression, while sometimes strabismus is present, and at other times the eyelids are paralyzed; perspiration rather free in the early stages; masti cation and deglutition impaired, and some patients will require an hour or more to drink a pail of water. The head is sometimes held almost in a line with the neck, or twisted on one side with the eye pointing toward the ground; and one ear may be held erect, while the other is lopped and paralyzed. Locomotion is seriously impaired, and the animal stands with its feet wide apart as if trying to brace and steady itself, and when moved the feet are raised only a short distance from the ground; sometimes the patient is unable to assume a standing position, while others walk and act somewhat like human beings affected with *locomotor ataxia*, and stagger from side to side, and, if hurried, fall down and turn somersaults in all directions. The animal appears much frightened and nervous, and there may be a well-marked quivering of a certain set of muscles for several days or weeks after the accident. The functions of the digestive and urinary organs are somewhat impaired in the early stages, but soon regain their normal condition. The nerve cells are seriously injured, and the functions of the nervous system are impaired, and sometimes permanently damaged. I have not yet had any opportunity for post-mortem examinations on this subject, but Dr. Jackson informed me that Dr. Jennings and himself had found well-marked congestion of the mesenteric glands in a horse that had been killed by an electric shock received on street car-tracks, and the same horse's heart was greatly hypertrophied, which probably accounts for the sudden death. Elevated wires are sometimes displaced and prove fatal to horses which come in contact with them.

Treatment consists in hypodermic injections of strychnia, atropine, digitaline, and administration of stimulants and nutritives, either in drenches or enemas. It is sometimes necessary to secure and confine the patient in slings for several weeks or months, but mild cases usually do nicely in comfortable box-stalls. Feed and water from high mangers. Tonics and alteratives are beneficial during convalescence, which is generally tardy and unsatisfactory. The owners usually desire post-mortem examinations on the remains of horses killed by electricity; while horses severely shocked and injured are generally treated for some time, in order that damages may be legally recovered from the traction company.

A few cases may be cited to illustrate the above remarks. I have had a case under treatment and observation for about four months, and it is not yet well enough to walk out of the stable. Although the company veterinarian diagnosed it as a simple case of pleurisy, which would be cured in a few days, two of the ablest veterinarians in the city were called in as evidence and confirmed my diagnosis—electric shock.

Dr. J. E. McNeil kindly showed me a horse which had been shocked about a year ago and was then driven three miles to the country; the patient suffered severely and was unable to control his actions, and it was found necessary to confine him in slings for a period of twenty-one weeks. This horse is not yet fit for any work.

I saw a large, heavy draft horse that was shocked early last winter, and the owner finally became discouraged, and gave the horse away to a farmer.

There is a great variety of mild forms of electrical injuries which appear to cause a reduced or increased function of certain sets of muscles of locomotion, especially the abductors, flexors, and extensors of the posterior extremities.

Pleuro-pneumonia.

From a report of the Veterinary Committee of the Royal Agricultural Society we gather that in the course of the twelve months during which the Pleuro-pneumonia Act has been in operation, Sept. 1890, to Sept. 1891, 295 outbreaks have occurred. In the course of the earlier part of the twelve months the disease existed in thirty-four counties in Great Britain, viz., twenty-five in England, and nine in Scotland, but during the last month of the twelve it was confined to seven counties in England and one in Scotland. In the past three months, September, October, and November, there were only twenty-six outbreaks of pleuro-pneumonia in Great Britain, and these were confined to seven counties in England and one in Scotland. In the corresponding period of last year, when the Board of Agriculture began the work of stamping out the disease, there were 116 fresh outbreaks.

The Board of Agriculture.

Sir Jacob Wilson, the well-known Westmorland agriculturist, has been offered by Mr. Chaplin, and has accepted, subject to the necessary consent of the Treasury, the post of Director of the Land Department of the Board of Agriculture, which has been filled up to the present by Sir James Caird. The appointment will give very general satisfaction.

The Secretary of the Board of Agriculture, which will be vacated at the end of the present year by Colonel Leach, C.B., will also be filled up very shortly, and it is an open secret that Mr. Chaplin's choice has fallen on Mr. T. H. Elliot who has been for some years private secretary to Mr. Ritchie.

High-Speed Locomotion.

Some curious facts are brought into prominence by a correspondent of *Cycling*, who has been at the pains to draw up a comparative table of the rates of speed in different modes of locomotion. The fastest time in which a train has been known to travel a mile is 49 sec. and a fraction; to accomplish the same distance the fastest bicyclist who has hitherto ridden took 2¾ min., or just about three times as long. An ice-yacht has travelled a mile in 1 min. 10 sec., a horse in 1 min. 35½ secs., a torpedo boat in one min. 50 sec., a steam-yacht in 2 min. 12 sec. and a fraction, and a skater on the ice with a favourable wind behind him in 2 min. 12 sec. and a fraction. The oarsman is much slower, taking 5 min. 40 sec. to travel a mile; and slowest of all is the swimmer, who requires very little short of half an hour to perform the same journey.

Spratt's Calendar.

Spratt's Patent have issued a hanging calendar for the coming year. Each of the twelve leaves carries a lithograph in monochrome of a type of breed in poultry and dogs, for both of which they cater in specially prepared foods. The illustrations are by well-known artists and the printing by a London firm. Each leaf has, at back, a standard list of the points of the breed.

CORRESPONDENCE.

INTER-TRACHEAL SYRINGES.

Dear Sir,

I notice in your report of the discussion on "Husk in Calves" by Mr. Wartnaby, the president noticed the usefulness of the "plug" syringe over the usual screw. I can most fully endorse his remarks and would add that the various syringes, viz:—hypodermic, quittor, wound, and intra-tracheal that we use are upon the same principle, and that the credit of introducing them to us belongs to Mr. Huish, who showed them eight or ten years ago.

I consider this form of hyperdermic syringe by far the best, not only for its obvious utility in introducing the tubular needle *alone*, but also on account of the facility with which one can fill the syringe by "plugging" the nozzle into the metal mount fitted to the bottles containing the medicated solutions. Another undoubted advantage in this syringe is that literally the barrrel is all metal, with a portion cut away to show the graduations upon the glass cylinder, having a screw thread at either end upon which the metal caps, top and bottom, are screwed on, thus obviating the use of cement which quickly dissolves and renders the syringe useless after it has contained ether.

With regard to the "intra-tracheal" syringe recently introduced by the the same vendor I would say it is on the principle above referred to but unlike the hypodermic syringe, the graduation is upon the metal, hence, should the glass cylinder become broken a new one can be supplied for a merely nominal price.—Yours, etc.,

J. Randolph Welsby, M.R.C.V.S.

MILK CONTAMINATION.

Dear Sir,

In *The Veterinary Record* for July 18th is an article on "Diphtheria at East Croydon." While readi g it to-day the last sentence—"But which never affects the family or the servants of the dairyman.—struck me as having a good deal of meaning. The question is, why does it not affect the dairyman's family, etc.? We know that milk is a habitat and medium for germs. If dairymen adulterate their milk may it not be that germs of disease thus reach the milk and develop virulent properties?

Dairy people may have eruptions on their hands, etc. and might easily adulterate the milk in that way. Dirty milk cans or other articles of use might also help to cause an outbreak.—Yours truly,

December, 1890. C. Ward, M.R.C.V.S.

VETERINARY EDUCATION.

After reading the article by "Country" in your issue of Nov. 28th, and a letter I have received recently from a student at the R. V. C., who states "the game presently won't be worth the candle," I have arrived at the conclusion that very much difference of opinion exists amongst those who have passed and the students who are trying to pass.

"Country" styles himself "a young member of the profession," and seems dissatisfied with the manner in which he has been examined—that it was too easy? Does he, having been admitted into the profession, desire to keep others out by making the examinations unnecessarily severe? I should like to know what has made him feel his position socially to be a failure so early. One inference seems to be that he entered the profession for position, and not for practical work. My idea is that if

the intending veterinary student wishes to join our body for social position only he may fare better elsewhere. There seems a tendency to have students unnecessarily educated—so that they are rather unfitted than otherwise for the duties devolving on them. Getting into our ranks those who are so highly refined and educated will, I am afraid, be a barrier in the way of many useful men, thus creating an opening amongst agriculturists for those who style themselves horse and cattle doctors, etc. What is wanted in the country districts is a sound, steady, practical man who can tuck up his sleeves to do the work, and who is not afraid to soil his fingers or boots. These are the men sought after, and who at all times, by their conduct and character, hold the social position that so many older members of the profession now enjoy, and which perchance may be "Country's" lot if he so acts and waits.—Faithfully yours,

A Busy Practitioner.

WHEN TO SEE PRACTICE.

Dear Sir,

Will you allow me to make a few remarks about "Compulsory Pupilage."

In this week's *Record* Mr. Knowles advocates it strongly, and before the student enters the college. I should say, No. Let the student pass his first and second examinations, and during his second year's course, attend the "Principles and Practice of Veterinary Surgery," lectures, then before studying for his "final" let him have compulsory pupilage. He will understand things much better, having the "Principles" of Science.—

Yours truly, Chas. Ward, M.R.C.V.S.

Communications, Books, and Papers received:—Messrs. R. H. Potts, A. Leather, J. R. Welsby, R. N. Powys, W. H. Williamson. "Hosier and Draper" (Thanks for letter, but—*cui bono?*) "Spratt's Calendar," "Vinton's Almanac

Original articles and reports should be written on one side only of the paper, and authenticated by the names and addresses of the writers, not necessarily for publication.

We shall be obliged by early intelligence of all matters worth bringing under the notice of the profession, and thankful to any friends who may send us cuttings from local papers, containing facts of interest.

Communications for the Editor to be addressed 20 Fulham Road, S.W.

Veterinary Societies—Addresses.

Bombay V.M.A.
Pres
Hon. Sec: S. K. Nariman, Esq., M.D., B.S.C., L.V.SC.
Off Hon. Sec: Mr. J. D. Parokh, G.B.V.C., Bombay Vet. Coll.

Border Counties V.M.S.
Pres: Mr. J. Pender, M.R.C.V.S., Lockerbie.
Hon. Sec: Mr. J. Armstrong, M.R.C.V.S., Penrith, Cumberland
Meetings, Second Friday of Feb., June, and October.

Calcutta V.M.A.
Pres: Mr. Greenhill, M.R.C.V.S.
Hon. Sec: Mr. T. Assheton Smith, 155 Dhurrumtollah.

Central V.M.A
Pres: Mr. W. Roots, M.R.C.V.S.,
13 Winchester Street, London, S.E.
Hon. Sec: Mr. H. G. Rogers, M.R.C.V.S.,
170 Brompton Road, London, S.W.
Meetings, First Thursday in each month, except August and September, First Avenue Hotel, Holborn. at 7 p.m.

Eastern Counties V.M.A.
Pres: Mr. Wm. Bower, M.R.C.V.S., East Rudham, Swaffham.
Hon. Sec.: Mr. R. S. Barcham, M.R.C.V.S., North Walsham.
Meetings, Second Tuesday, Feb. and July.

Vet. Med. Assn. of Ireland.
Pres: Mr. C. Steel, F.R.C.V.S., 188 Clonliffe-road, Dublin.
Hon. Sec: Mr. J. McKenny, M.R.C.V.S.,
116 Stephens-green-west, Dublin.

Lancashire V.M.A.
Pres: Mr. W. Woods, F.R.C.V.S., Standish Gate, Wigan.
Hon. Sec: Mr. J. B. Wolstenholme, M.R.C.V.S.,
Quay Street, Manchester.
Meetings, 2nd Wednesday in March, June, Sept., & Dec

Lincolnshire V.M.S.
Pres: Mr. F. L. Gooch, F.R.C.V.S., Stamford, Lincolnshire
Hon. Sec: Mr. J. Smith, M.R.C.V.S., Huntingdon.
Meetings, Second Thursday, Feb., June and October.

Midland Counties V.M.A.
Pres: Mr. John Malcolm, F.R.C.V.S.,
Holiday-street Wharf, Birmngham.
Hon. Sec: Mr. H. J. Dawes, M.R.C.V.S.,
High St,. West Bromwich.
Meetings, Second Friday in Feb., May, Aug, and Nov.

National Vet. Association.
Pres: Prof. J. McCall, Veterinary College, Buccleuch St., Glasgow
Sec: Mr. John Malcolm, F.R.C.V.S., Birmingham.
Treas. and Chairman of Prov. Com: Mr. S. Wragg, F.R.C.V.S.,
17 Church-lane, Whitechapel.

North of England V.M.A.
Pres: Mr. G. R. Dudgeon, M.R.C.V.S., Sunderland.
Hon. Sec: Mr. W. A. Hancock, M.R.C.V.S.,
Forest Hall, Newcastle-on-Tyne.
Meetings, Third Friday, Feb., May, Aug. and Nov.

Royal Counties V.M.A.
Pres: Mr. H. Lepper, M.R.C.V.S., Aylesbury.
Hon. Sec: Mr. J. Sutcliffe Hurndall, M.R.C.V.S., 2 Gloucester Terrace, Blackheath, S.E.
Meetings, Last Friday, Feb., June and Nov.

Royal Scottish V.S.
Pres: Mr. Reid, M.R.C.V.S., Auchtermuchty.
Hon. Sec: Mr. W. D. Fairbairn, M.R.C.V.S., Cupar, Fifeshire

Royal Veterinary College M.A.
Pres: Mr. Wild.
Hon. Sec: Mr. T. F. Wilson.

Scottish Metropolitan V.M.S.
Pres: Mr. Jas. Clarke, F.R.C.V.S., Coupar-Angus.
Hon. Sec: Mr. P. Moir, M.R.C.V.S., 9 Kilmain Terr. Edinbro'

South Durham and North Yorkshire V.M.A.
Pres. & Hon. Sec: Mr. W. Awde, F.R.C.V.S., Stockton-on-Tees.
Assistant Hon. Sec: Mr. W. N. Dobbing, M.R.C.V.S.
Meetings, First Friday, Mar., June. Sept. and Dec.

Southern Counties V.M.S.
Pres: Mr. E. A. Hollingham, M.R.C.V.S.,
79 Anerley Road, London, S.E.
Hon. Sec: Mr. C. Pack, M.R.C.V.S., Lymington, Hants.
Meetings, Last Thursday, Mar., June and Sept.

Western Counties V.M.A.
Pres: Mr. W. Penhale, F.R.C.V.S., Barnstaple, Devon.
Hon. Sec: Mr. W. Harvey Bloye, M.R.C.V.S.,
Week Street, Plymouth.
Meetings, Third Thursday, March and September.

West of Scotland V.M.A.
Pres: Mr. D. Allan, M.R.C.V.S., Clarkston-by-Busby, Glasgow
Hon. Sec: Mr. W. Anderson, F.R.C.V.S., West Nile-st. Glasgow

Yorkshire V.M.A.
Pres:
Hon. Sec: W. F. Greenhalgh, M.R.C.V.S., Hunslet, Leeds.
Meetings, Last Friday in Jan., April, July, and October.